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## Investigating Primary School Teachers' Perceptions about Professional Development and its Impact on Students Achievement

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### Key Words

Professional Development, Subject Knowledge, Effective Teaching, Student's Achievement

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**Abstract:** This investigation sought to find out how primary school teachers felt about the value of professional development and how it affected students' academic achievement. Specifically, the researchers were interested in how teachers perceived the value of professional development. The researchers utilized a quantitative research methodology and a self-developed survey questionnaire in order to collect data for the purpose of evaluating teachers' professional development and students' academic success. This allowed the researchers to accomplish the goal of the study and fulfil its purpose. The data were analyzed through SPSS and Smart PLS. According to the study's findings, teachers expressed their level of satisfaction with the effectiveness of professional development at all levels because all three hypotheses were supported, which showed that there is a positive significant effect of effective teaching strategies, well planning and subject-matter knowledge on students' achievement. The study recommends that professional development programs should be enhanced and integrate new technologies for the capacity building of teachers at school levels in the province. On the basis of the conclusion, it is further recommended that academicians and higher authorities should take attentive steps to enhance professional development models as per the need of the 21st century with critical thinking, integration of new technologies and 21st-century skills for better teaching-learning.

## Introduction

Teachers are always regarded as the most important players in the educational system, and therefore, if the quality of education is to be improved, it is necessary to invest in the professional development of these educators. Since these teachers are responsible for ensuring that students receive a high-quality education, there is a pressing need for high-quality professional development programs. Indeed, it is in the classrooms that the nation's resolution is forged (Tahir, Malik, Nawaz & Jabeen 2014). Internationally, it is understood that human development is not the same as rhubarb in terms

of taste and texture. It can be fostered, motivated, and encouraged, but it cannot be coerced or compelled into submission. It takes time for real and long-lasting change to occur. Teachers' roles continue to increase in order to satisfy the changing requirements of our society. Teaching is a self-motivated activity; the majority of what happens in a classroom changes swiftly, but the function of the teacher remains constant. They educate and train young people to be active citizens and autonomous lifelong learners, which is critical for their employment prospects. Teachers are constantly learning new things

through training. All of this is covered in in-service training. The identification of needs for teacher professional development should be the first step, preferably. Knowledge, abilities, and attitudes that a teacher should develop in order to operate as an effective teacher are referred to by the term "teacher competencies." The teacher's compunctions, on the other hand, are critical for initial teacher preparation, in-service training instructor assessment, and career promotion (Khurshid & Tassawar, 2012).

It was said by Guskey (2000) states that professional development is a purposefully structured, continuing, and systematic process that strives to improve an individual's professional knowledge, abilities, and attitude in order to increase student accomplishment. In today's environment, there is a strong emphasis on continuing education throughout one's life. Teachers' professional development is becoming increasingly important as they deal with complex and dynamic changes and problems in the school environment. In the field of professional development, the phrase professional development has become frequently used to refer to continual education and training for professionals. There are various other notions associated with ongoing professional development, such as teacher development, staff development, and professional development, that are all related to professional development (Wan & Lam, 2010). The quality of an educational system's teachers is the single most important factor in determining its overall effectiveness. As the world evolves and new global knowledge becomes accessible, the government and new educational institutions are placing a greater emphasis on educating their workforce in order for them to be able to comply with international standards. In addition, they are attempting to keep up with international competitors in terms of producing the highest quality of teachers by engaging in ongoing professional development. Having sufficient knowledge of the subject matter that one is going to teach in the classroom is the most important component of good

teaching. This ensures that students are able to learn more efficiently and acquire a more in-depth understanding of the material, as well as succeed in their respective examinations (Jadama, 2014). There are numerous approaches that a teacher can use to teach in a creative and successful manner. Throughout his teaching career, he has employed a wide range of abilities and a wide range of different types of knowledge. As someone goes from one job to another or from one classroom situation to another, he may discover that his teaching spirit shifts. His teaching method may change as he transitions through different stages of his professional and personal life. Preparation for effective teaching begins with understanding how he perceives his own role, his own strengths, and his own talents (Maude, Hodges, Brotherson, Hughes-Belding, Peck, Weigel, & Sharp, 2009).

The researchers came to the conclusion in their research that each individual has his or her own constructs that are based on his or her unique previous experiences as well as collaboration with other members of society. As the researchers pointed out, teaching practices have evolved more toward students' needs than they have toward teachers' expectations. Learning exercises that are based on real-world circumstances are more fruitful and may be implemented in a variety of situations that arise in everyday life, according to research (Harfield, Davies, Hede, Panko & Kenley, 2007). The researcher wants to explore the areas that have remained unexplored in the above-mentioned studies. It has been acknowledged at the international level that a teacher's professional development plays a vital role in enhancing the student's achievement. The current professional development activities in America, the UK, Pakistan, as well as other countries of the world, have pointed out that professional development activities are not focusing on solving classroom problems of teachers, practices of pedagogy in classroom situations and assessment as well (Chaudary & Imran, 2012). Sindh province is facing a lot of problems in the education setup of

Pakistan. In Sindh, primary education needs much attention because this is the bedrock of the education system. In enhancing primary-level education, primary school teachers have an important role. Primary school teachers in Sindh have fewer opportunities for professional development due to a lack of resources and facilities in the school. Primary school teachers should be more focused and equipped with content knowledge, instructional planning, effective communication, and assessment in the class. The current study will explore the primary school teacher's perception of the effectiveness of professional development programs and their impact on student achievement.

### **Objectives of the Study**

The purpose of this study was to explore the primary school teacher's perception regarding the effectiveness of professional development and its effect on students' achievement

### **Research Questions**

What are the perceptions of primary school teachers on professional development and its impact on students' achievement?

### **Literature Review**

Professional development is a well-planned, ongoing process that tries to improve an individual's professional knowledge, abilities, and attitude in order to increase student accomplishment, according to Guskey (2000). According to Bubb (2004), professional development is any activity that increases a person's knowledge, abilities, and understandings in order to boost organizational effectiveness. Professional development is continuous training and education during a career to enhance the skills and knowledge required to execute a job or series of tasks. PD should be a well-organized, structured process that includes training for meeting those requirements as well as effective teaching methodologies. According to Ahmad, Ali and

Sewani (2022), the terms continuing teacher development, continuing education, professional development, professional learning, in-service education, professional growth, ongoing assistance, human resource development, continuous career development, and life-long learning have all been used to describe professional development. Teachers learn and behave better when they take the time to engage, study together, talk about teaching, and support one another in putting new skills and strategies into practice (Ahmad, Sewani & Ali, 2022). This is due to the fact that a social persuasion is a potent tool for modifying views. In addition to helping teachers modify their ideas, a feeling of community and the encouraging coaching and mentoring it offers are essential for fostering and sustaining teachers' sense of efficacy in relation to new teaching techniques. The major thrust areas of this policy are to access, equity, and quality of education by developing are improving teachers' capacity in terms of content, methodology, assessment areas and management skills. The ultimate aim is to improve student achievement by enhancing teachers' skills and pedagogical knowledge in their classroom teaching (Shami, 2014).

### **Significance of Professional Development**

The researchers highlighted in their research project that teachers' professional development is very important for the enhancement of quality education and for improving student achievement in Pakistan. It can also bring sustainable economic and social change in the upcoming years (Ginsburg, Rose & Adelman, 2011). As the researcher articulated in his study, a teacher's professional development (TPD) is very important for a teacher's personal growth, changing his beliefs and classroom practices and improving student achievement. It is based on the type of professional development practices and teachers' personal enthusiasm. Evidence also indicates that teachers' professional development and classroom practices are not as simple as it looks (Villegas-Reimers, 2003).

During these times, working instructors upgrade their subject knowledge and instructional techniques to reflect the advent of a new curriculum, fresh information on teaching and learning, shifting demographics, etc. There is evidence that professional development has a positive impact on student achievement. The researcher went on to say that a strong predictor of kids' academic progress is instructors' professional development in effective teaching. As a result, pupils with effective teachers should perform better in school. According to Sixel (2013), teachers add their unique perspectives, backgrounds, and experiences to the professional learning in which they are participating. Their ability to learn is impacted since there are no universally effective teaching methods for all learners because teachers and students differ greatly. Teachers require diversified professional learning that serves their needs in addition to the requirements of their pupils, whose needs are covered by the differentiation approach.

### **The Intentions of Professional Development in the light of empirical studies**

According to Alharbi (2011), "The development and Implementation of PD program for Newly Qualified Teachers in Saudi Arabia," the goal of PD in an international context is to improve teachers' professional knowledge and student achievement. The researchers used a qualitative approach and collected data in two phases. Classroom observations led to interviews for the researcher. Constant comparison analyzed the data. The PD programs' activities, substance, and implementation also performed well. They also suggested that Saudi instructors benefit from PD and that future studies should focus on it. According to Sixel (2013), the Wisconsin Quality Educator Initiative's professional development strategy affected teachers' classroom practices and kids' learning. In-depth interviews, annual reflection logs, and professional development plan papers were used to investigate teacher perceptions using a qualitative method. Self-directed learning through a professional

development plan: Does it improve teachers' teaching styles and student learning? To answer this key study topic, semi-structured interview questions were used. According to the report, required professional development programs under PI 34 did not motivate educators to learn.

Professional educators, effort, and time are needed to change classroom instruction and improve student learning. In "Middle School Teachers' Perceptions of Professional Development Experiences," Robinson (2011) found that teacher professional development improves classroom practices and student achievement. A survey questionnaire was used to collect data from 862 instructors at 21 North Carolina public schools. Data were examined using the percentage, mean, standard deviation, and t-test. According to the study, teachers' opinions of professional development affect classroom practices and student outcomes. Sywelem and Witte (2013) found this in their study, "Continuing Professional Development: Opinions of Primary School Teachers in Saudi Arabia." Participants didn't understand CPD programs' value and importance. Over half of them said in-service training helped them learn new content and skills, solve classroom challenges, and come up with classroom management ideas. This study shows that teachers often block staff development and don't understand its relevance. This study showed that professional development programs must provide meaningful lesson plans and instructional methodologies for instructors to learn and value new knowledge and abilities. It's crucial to combine teacher, administrative, and school goals to encourage teacher engagement, professional development, and mentorship connections.

According to Tahir et al. (2014), "Teachers' Views regarding Impact of Continuous Professional Development Program on Quality Education in Division Gujranwala," schools must change to improve. CPD creates strong teachers to lead this shift, so schools must prioritize it.



One hundred of Gujranwala Division's 1481 elementary school teachers were chosen by researchers. They collected data using a quantitative method and a self-made questionnaire. Data were evaluated using the Statistical Package for Social Sciences (SPSS). The study problems were examined using descriptive statistics, means, standard deviation, and t-tests to detect statistically significant variations between survey item means. The survey questions and research themes were correlated using Pearson correlation analysis. They found: Primary school teachers can collaborate to improve CPD. Multidisciplinary, grade-level, or lesson-specific collaborative teams of teachers work toward shared goals. Schools can enhance and offer teachers with resources through CPD. Schools will improve by sponsoring outstanding CPD and well-planned professional development.

### **Usefulness of Professional Development**

Butcher (2005) stated in his book that usefulness means sound planning, grasp of what is going to teach, mastery of different teaching models and methodologies and, most important, time management which enables the person to check whether the acquired student's achievement is achieved in this particular time period or not. He highlighted in their research project the following key points of an effective PD. Effective PD involves both "knowledge" of what is going to teach and why it is going to teach, and it is "execution" of how to inculcate the knowledge of the subject matter among students. It's all about knowing both the "why" and the "how" and putting learning into practice in their routine work. The researchers identified in their research report that an effective PD is which deals directly with the individual's need and support school-based needs. According to Aslam (2011 & 2013), successful professional development programs provide instructors with the same learning activities they would use in the classroom and foster a learning environment for the improvement of students' accomplishment. Tantranont (2009) asserts that some

professional development (PD) activities are more likely than others to give teachers well-organized learning opportunities, the time, activities, and content they need to advance their knowledge and to encourage significant changes in their classroom practices by utilizing a variety of teaching strategies and effective teaching models. These professional development activities include coaching or mentoring, in which teachers work one-on-one with another educator with a similar level of experience or greater, and result in measurable changes in students, and study groups, in which teachers engage in routine, structured, and cooperative interactions around topics chosen by the group.

### **Essential Features for Effective PD Program**

The researchers described that well planning, subject matter knowledge, and models of effective teaching strategies are necessary for an effective PD program. (Butcher, 2005; Opfer & Pedder, 2010; Tantranont, 2009; Archibald, Coggshall, Croft & Goe, 2011; Nancy, 2012; Tahir et al., 2014).

### **Planning**

Planning and curriculum planning were topics highlighted by Alabi and Okemakinde (2010). The term "planning" refers to the process of putting together a plan of action for the future. They go on to say that planning is the methodical gathering and analyzing of data for the purpose of forecasting future developments, including estimates of the human, physical, and financial resources required to implement the proposed developments, with an eye towards maximizing the likelihood of success. It is clear from these definitions that planning is a continual process with an eye towards the future and a focus on growth. Consequently, educational planning is a set of decisions regarding the direction of education in the future; it is the application of rational and methodical analysis to the growth of education with the aim of better serving the needs and attaining the goals of its students and society. It is the process of putting into practice

the values and beliefs that educators aim to instil in their students through a method that begins with defining the problem, moves on to considering the options and making a well-considered decision, setting attainable goals and timelines, and concludes with devising the most effective strategies for systematically putting those goals into action. No matter the task at hand, or the structure in which it is performed, careful planning is essential. Professional development programs for teachers that are well-designed have a substantial effect on student progress. In the classroom, students benefit more from teachers who are well-organized than from those who are not (Killen, 2009).

Planning is important to PD because it enables the identification and set priorities according to urgency and importance to acquire the student's achievement. Killen (2009) and Starnes (2011) both argued that in order for principals and teachers to be supported in their efforts to raise student achievement, well-planned professional development programs rooted in practice, designed using adult learning theory, and focused on specific strategies were essential. Research on PD shows that "well-structured PD can lead to successful improvements in teachers' practice, school development, and gains in students' achievement only when it has clearly stated targets and objectives and is given by experts," as cited by Opfer and Pedder (2010). They further explained that it could only be possible when the stakeholders of PD align the PD planning with the classroom issues pertaining to schools. The management of PD finds out about these problems and tries their best to provide a healthy environment in the schools so students and teachers can talk to one another with a positive mind.

### **Subject Matter Knowledge**

Pennington (1994) highlighted in his research article the importance of PD and particularly

focusing on subject matter knowledge, which makes a teacher more confident when he has full command of it before he is going to teach in the classroom. It is always concerned with the betterment of the good of pupils articulating the importance of subject matter knowledge to build the teachers' confidence level as well as to enhance the student's learning outcome. He separated subject-matter knowledge into three primary categories: pedagogical content knowledge, curricular knowledge, and subject-matter knowledge. In their research study, Archibald et al. (2011) concentrated on the idea that a teacher's command of the subject matter is a crucial first step in bringing about good and long-lasting change in students' learning. Tantranont (2009) emphasized that professional development activities should be explicitly targeted at enhancing and expanding instructors' subject-matter expertise. High-quality professional development enables educators to advance their knowledge of the subject matter, instructional techniques, technological applications, and other critical components of high-standard teaching. Additionally, the professional development material must be relevant to the target consumers and their individual demands. Teachers should be involved in determining what they need to learn, and professional development should be planned in accordance with those requirements in order to improve student accomplishment.

### **Students Achievement**

Killen (2009) articulated in his book that students' achievement or outcome-based education consists of the following grounds such as students are able to describe things critically, try to associate the things, trying to apply the new knowledge in their practical life. Bloom (1956) highlighted that student achievement not only means a score in particular exams but it means the development of new knowledge, skills, attitude and values as well. A teacher should be clear about the student's learning outcomes and

then adopt effective teaching strategies to achieve those particular objectives/outcomes.

It is acknowledged that student achievement can be divided into three main categories cognitive, affective and psychomotor outcomes. In other words, it may say that student achievement typically involves the development of new ways of thinking, feeling and acting. The administrators, policymakers and legislators give priority to cognitive outcomes related to student's academic achievements, such as knowledge, abilities, skills or understanding that might be expected students must acquire, although the affective outcomes are attitudes, beliefs, feelings or dispositions that might be expected to develop among students and psychomotor outcomes are behaviour, actions or practices are vitally important as well (Guskey, 2000).

The creation, planning, design, and execution of the programs have all been found to have problems. As stated by Mahmood and Iqbal (2010), the ultimate goal of professional development is to increase student accomplishment, which has yet to be observed, although improvement in classroom procedures is a positive step in that direction. There is evidence that PD programs have altered how teachers conduct themselves in the classroom. The success of the students is significantly impacted by the professional development of the teachers. For teachers to effectively participate in professional development programs and produce their best work in order to raise students' academic progress, they must be recognized and given financial and instructional support (Villegas-Reimers, 2003). Programs for teacher professional development assist working educators in staying current and becoming familiar with new advancements in pedagogy and content in education. This is crucial because it enables educators to educate kids about a world that is becoming more and more international by keeping them informed of new developments (Anangisye, 2011). King (2012) highlighted that

student achievement is not only meant to get high marks in teacher-made or standardized tests but it's meant to develop the students in their cognitive, affective and psychomotor areas so the students can perform his/her role in society. He also pointed out that a teacher's professional development has a significant impact on students in terms of cognitive, affective and psychomotor domains.

## **Methodology**

### **Research Design**

A quantitative research design (Creswell, 2014) was employed to collect and assemble the data from the respondents. This study examined the teachers' professional development and its impact on student achievement. The targeted Population of the study consisted of all male and female primary school teachers of District Korangi, Sindh, Pakistan, which were selected through a simple random sampling technique. Data were collected using a self-developed survey questionnaire containing four constructs with 23 research items divided into four factors (07 items for well-planned effective PD, 05 items for subject matter knowledge, 05 items for m effective model of teaching strategies, 06 items were added to assess the student's achievement in terms of the effectiveness of professional development. There were two sections of the research questionnaire, such as teachers' demographics, gender, academic and professional qualification and experience, while the second section was designed to gather teachers' perspectives on professional development and its impact on students' academic performance. The survey questionnaire was finalized and validated before being distributed to the respondents, and consent was taken by the respondents. Two hundred survey questionnaires were distributed among the respondents, who were instructed to properly read the given statements and select the right answer based on their understanding on the 5-point Likert scale range of 1=strongly disagree to 5=strongly agree. Among the 200 forms, 180

filled survey forms were found appropriate for data analysis.

### Data Analysis and Interpretation

The study's goal was to examine teachers' perceptions of effective professional development and its effect on students' achievement. The first section of the analysis contains information about the respondents' demographics, which were analyzed through SPSS version 22, and the second section describes the teachers' opinions about the impact of professional development programs on students' academic achievement, which were analyzed through structural equation modelling using Smart PLS.

### Demographic information of the participants

In this study, one hundred eighty teachers were selected that voluntarily took part in the research. There were a total of 122 females (67.8% of the total) and 58 males (32.2% of the total). The academic qualification showed that the majority of the participants have master's degrees, 129(71.7%) rest of the participants were graduates, 51(28.3%). In the same manner, the majority of teachers hold an M.Ed. degree, 89(49.4%) as their professional qualification concerned. Experience distribution showed that the majority, 76(42.2%) of the population, have between 6-10 years of experience, as can be seen in the (table1).

**Table 1**

*Demographic Information*

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Female	122	67.8	67.8	67.8
	Male	58	32.2	32.2	100.0
	Total	180	100.0	100.0	
Academic Qualification	Graduation	51	28.3	28.3	28.3
	Masters	129	71.7	71.7	100.0
	Total	180	100.0	100.0	
Professional Qualification	A.D.E	4	2.2	2.2	2.2
	B.Ed.	81	45.0	45.0	47.2
	M.Ed.	89	49.4	49.4	96.7
	PTC	6	3.3	3.3	100.0
	Total	180	100.0	100.0	
Experience	1-5yrs	49	27.2	27.2	27.2
	11-15yrs	29	16.1	16.1	43.3
	16-20yrs	12	6.7	6.7	50.0
	20 and above	14	7.8	7.8	57.8
	6-10yrs	76	42.2	42.2	100.0
	Total	180	100.0	100.0	

### Measurement Model

Researchers tested the construct validity, convergent validity, and discriminant validity to ensure it was reliable and valid. Factor loadings reported above 0.7 substantiated the current

study's content validity. (Hair, Hult, Ringle, & Sarstedt, 2013). Internal consistency reliability was established, and the composite reliability represents the limit of acceptability. Cronbach's alpha values are above the minimum threshold of



0.7. As for CR, its values are greater than 0.7 and less than 0.95. Hence, once internal consistency has been established, there is no such thing as indicator redundancy. All factor loadings are larger than 0.7, and the average variance extracted (AVE) is greater than 0.05 (Hair, Rishe, Sarsted, & Ringle, 2019). Three results were examined to provide evidence that a set of items can be used to separate one variable from a broader set of factors. When all of the items were compared in terms of their cross-loadings, each

item loaded strongly against its own specific construct (Fornell & Larcker, 1981). Second, the values shown in the bold diagonal cells for each construct are greater than the values presented in the rows and columns for that construct because they represent the square roots of the AVE values for that construct which showed accuracy, and VIF values are less than two which showed there is no Collinearity issue among the items of the constructs. Overall, as indicated in tables (2 to 5), all of the results are up to the thresh hold.

**Table 2**

*Construct Reliability and Validity*

Constructs	Cronbach's Alpha	Rho_A	Composite Reliability	Average Variance Extracted
ETS	0.727	0.728	0.846	0.648
SA	0.740	0.745	0.852	0.659
SMK	0.789	0.799	0.876	0.703
WP	0.713	0.716	0.822	0.536

**Table 3**

*Discriminant Validity*

	ETS	SA	SMK	WP
ETS	0.805			
SA	0.747	0.812		
SMK	0.724	0.750	0.838	
WP	0.682	0.720	0.591	0.732

**Table 4**

*Fornell-Larcker Criterion*

*Outer Loadings*

Items of The Constructs	ETS	SA	SMK	WP
ETS1	0.789			
ETS3	0.837			
ETS4	0.787			
SA1		0.873		
SA2		0.809		
SA6		0.750		
SMK3			0.808	
SMK4			0.827	
SMK5			0.878	
WP1				0.727

WP2	0.755
WP3	0.737
WP4	0.708

**Table 5**

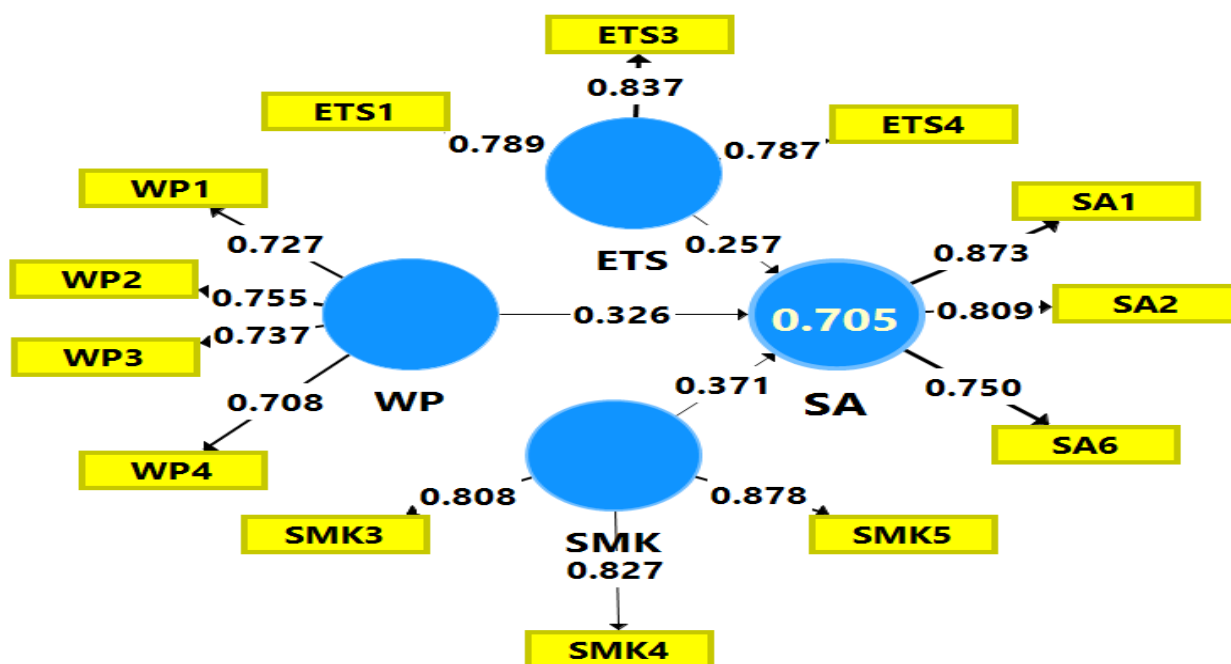
Collinearity Statistics (VIF)

Outer VIF Values

ITEMS OF THE CONSTRUTS	VIF
ETS1	1.414
ETS3	1.574
ETS4	1.381
SA1	1.902
SA2	1.504
SA6	1.425
SMK3	1.630
SMK4	1.580
SMK5	1.852
WP1	1.504
WP2	1.508
WP3	1.256
WP4	1.274

**Figure 1**

Measurement Model

**Structural Model**

Partial Least Squares- Structural Equation Modeling (PLS-SEM) in Smart PLS was then used

to investigate the stated hypotheses of the study once construct validity and reliability had been confirmed. It was done so that we could test our study's hypotheses (Ringle et al., 2015). By a wide

margin, the PLS-SEM methodology delivers more precise estimates than other covariance-based approaches (Hair et al., 2013). Table 6 shows that there is a statistically significant relationship between teachers' levels of ETS (t

=3.254, p = 0.001), SMK (t = 5.287, p = 0.000), and WP (t = 4.741, p = 0.000) when it comes to students achievement. This means that all three hypotheses, labelled H1, H2, and H3, have been accepted on the basis of the results. (See Table 6).

**Table 6**

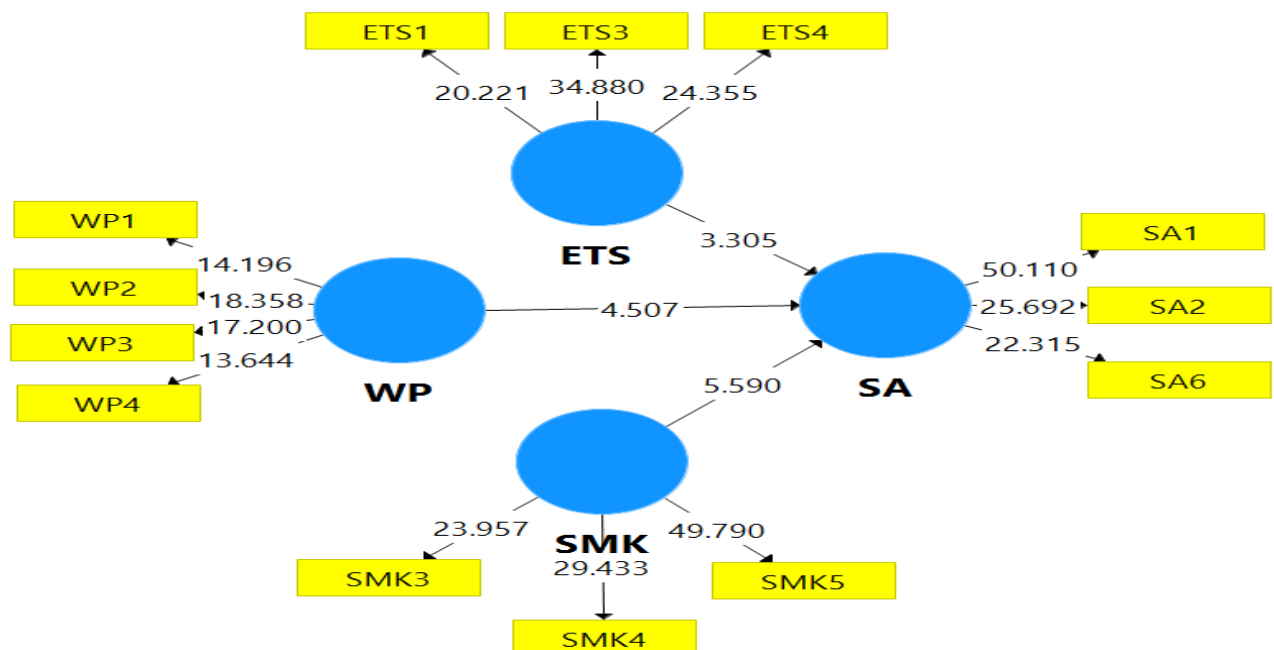
*Path Coefficients*

*Mean, STDEV, T-Values, P-Values*

Hypothesis	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values	F2	Decision
ETS -> SA	0.257	0.257	0.079	3.254	0.001	0.084	Supported
SMK -> SA	0.371	0.373	0.070	5.287	0.000	0.214	Supported
WP -> SA	0.326	0.328	0.069	4.741	0.000	0.185	Supported

**Figure 2**

*Structural Model*



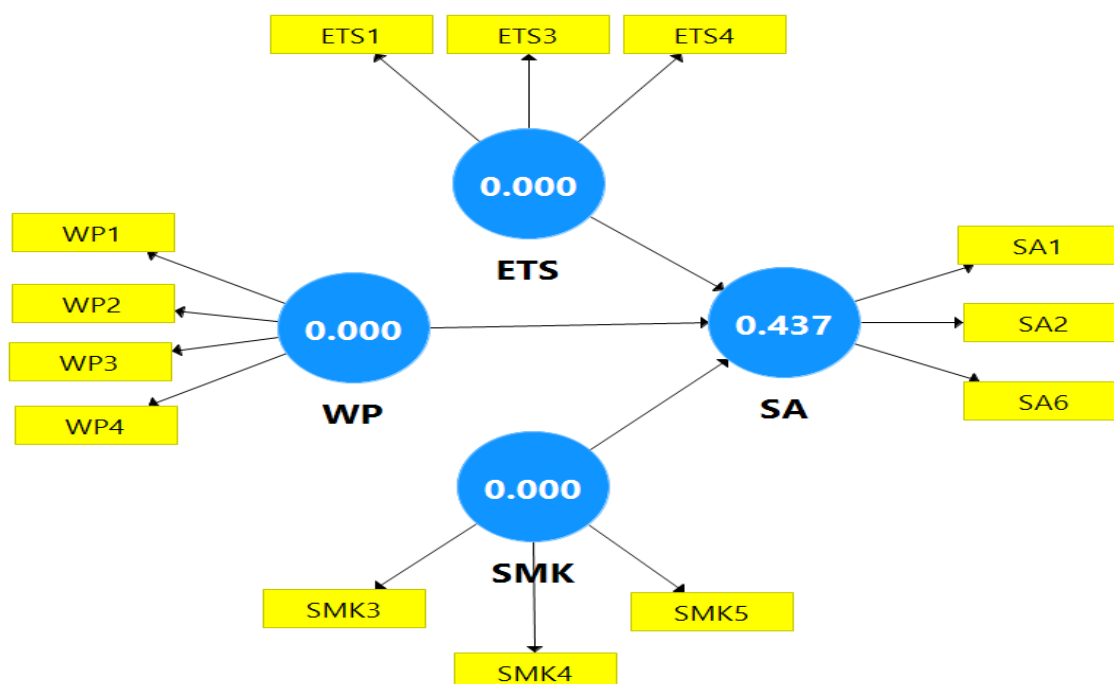
### Predictive Relevance of the Model

The predictive power of the various domains included in the structural model was examined using R square (Hair et al., 2013) and Stone Geisser's Cross-Validated Redundancy Q-square (Stone, 1974). Table 7 shows that the ETS, SMK, and WP components of professional development account for (R-squared = 0.705) of the variance.

That's a lot more than the threshold of 0.10 that (Falk and Miller, 1992) recommended for R-squared. Furthermore, the blindfolding procedure in Smart PLS yielded a Q-square value of 0.437, hence achieving a high threshold. This showed that the PLS-path model has predictive significance (Geisser, 1975).

**Table 7***R Square and Q Square*

DV	R Square	R Square Adjusted	Q SQUARE
SA	0.705	0.700	0.437

**Figure 3***Blind Folding*

## Discussion and Conclusion

The purpose of this study was to find out how teachers in Korangi, Sindh, Pakistan, felt about the value of professional development and how it affected their students' academic performance. All arguments going to be made on the bases of the findings of this study may be viewed in the light of the demographics of the respondents. One hundred eighty teachers were selected that voluntarily took part in the research. There were a total of 122 females (67.8% of the total) and 58 males (32.2% of the total). The academic qualification showed that the majority of the participants have master's degrees, 129 (71.7%) rest of the participants were graduates, 51 (28.3%). In the same manner, the majority of teachers hold an M.Ed. degree, 89 (49.4%) as their professional qualification concerned. Experience distribution showed that the

majority, 76 (42.2%) of the population, have between 6–10 years of experience. The analysis and results of the measure model showed that the study's questionnaire was valid and reliable, as well as all the results were significant, and the model was fit. Results of the structural model also indicated that all the hypotheses of the study were accepted, and there is a significant positive impact of all three constructs of professional development of the teachers on student achievement, and teachers perceived a high level of the significance of professional development. Findings of the structure model showed that there is a statistically significant relationship between teachers' levels of ETS ( $t = 3.254$ ,  $p = 0.001$ ), SMK ( $t = 5.287$ ,  $p = 0.000$ ), and WP ( $t = 4.741$ ,  $p = 0.000$ ) when it comes to students achievement. This means that all three hypotheses, labelled H1, H2, and H3, have been



accepted on the basis of the results. The results of the study described the highest level of teachers' perception of the effectiveness of PD. The effectiveness of PD results of this study supports the findings of past studies in the Pakistani context and globally (Tantranont, 2009; Archibald et al., 2011; Ahmad, Thomas & Hamid, 2020; Ahmad & Hamid, 2021; Ali, Ahmad, & Sewani, 2022). The results of the study described the highest level of teachers' perception of the effectiveness of PD and its impact on student achievement. The results of the study are also consistent with the previous studies findings, Mahmood & Iqbal (2010; King, 2013; Ginsburg et al., 2011; Akiri, 2013; Aslam, 2011 & Tantranont, 2009; Ali, Busch, Qaisrani, & Rehman, 2020).

## Recommendations

It is recommended on the basis of the conclusion that educational stakeholders should take the initiative to improve the in-service teacher's competencies through professional development programs. Particularly those who have lower professional qualifications and adequate teaching skills. PD stakeholders should focus on Primary School Teachers who do not have professional qualifications and provide them with proper training regarding the development of critical thinking and technology integration as well as enhance their pedagogical skills. In addition, In-depth exploratory research should be conducted at public and private levels to know the phenomenon in a different context to further explore how to bring sustainable change in professional development programs, teacher education institutes and capacity-building training programs for untrained teachers.

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